

09-11-06

Docket No. 6900/Y01/SYNX/SYNX/JW

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Re: Inventor(s): Michael Robert Rice, Jeffrey C. Hudgens, Eric A. Enghardt, Robert B. Lowrance and Martin R. Elliott  
Title: SYSTEM FOR TRANSPORTING SUBSTRATE CARRIERS  
Serial No.: 10/650,310  
Filed: August 28, 2003  
Examiner: James R. Bidwell  
Group Art Unit: 3651

Transmitted herewith is:

- ☒ PTO Form 1449;  
☒ Information Disclosure Statement with ninety-two cited references; and  
☒ Return Postcard.

FEE CALCULATION					
Fee Items	Claims Filed	Included With Basic Fee	Extra Claims	Fee Rate	Total
Total Claims	N/A	- 20 =	-0-	X \$50.00	\$0.00
Independent Claims	N/A	- 3 =	-0-	X \$200.00	\$0.00
Basic Filing Fee (\$300.00), Utility Search Fee (\$500.00), Utility Examination Fee (\$200.00)				\$1000.00	\$0.00
TOTAL FEES					\$0.00

— The Commissioner is hereby authorized to charge \$0.00 to Deposit Account No. 04-1696.

☒ The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 04-1696. A duplicate copy of this transmittal is enclosed.

☒ Please address all future correspondence to:  
**Customer # 41161**  
**Dugan & Dugan, PC**  
**55 South Broadway**  
**Tarrytown, NY 10591**

I hereby certify that this correspondence is being deposited with the United States Postal Service as express mail in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Express Mail Receipt No. EV854244229USDate of Deposit: 9/10/06

Signature:

Respectfully submitted,

Brian M. Dugan  
Registration No. 41,720  
(914) 332-9081



Express Mail Label No. EV854244229US

PATENTS  
6900/Y01/SYNX/SYNX/JW

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s) : Michael R. Rice et al.  
Serial No. : 10/650,310  
Filed : August 28, 2003  
For : SYSTEM FOR TRANSPORTING SUBSTRATE CARRIERS  
Group Art Unit : 3651  
Customer No. : 41161

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Sir:

In accordance with 37 C.F.R. §§ 1.56 and 1.97,  
applicants wish to call the attention of the Examiner to the  
following references:

U.S. Patent No. 4,006,813, Rene Fluck

U.S. Patent No. 4,166,527, Earl F. Beezer

U.S. Patent No. 4,222,479, Dugan, et al.

U.S. Patent No. 4,294,344, Johannes D. van Maanen

U.S. Patent No. 4,450,950, James C. Foote, Jr.

U.S. Patent No. 4,538,720, Jean-Louis Limousin

09/12/2006 RNEBRAHT 00000071 041696 10650310

01 FC:1806 180.00 DA

Shih-Hung Li, et al. "An Ultrahigh Speed Assembly Robot System. Part I. Design", 1994, Proceedings 1994 Japan-U.S.A. Symposium on Flexible Automation - A Pacific Rim Conference, Vol. 2, pages 465-72.

Roberts, et al., "Feed Chute Geometry for Minimum Belt Wear", Sept. 1998, 6th International Conference on Bulk Materials Storage, Handling and Transportation, pages 153-159.

Saigo, et al., "Drive Control Systems for Processing Lines", 11/10/2000, Fuji Jiho (Fuji Electric Journal), Vol. 73, No. 11, pages 45-49, Japanese language (Abstract only).

Saigo, K., "Variable-speed Drive Systems for Industrial Plants", 11/10/2000, Fuji Jiho (Fuji Electric Journal), Vol. 73, No. 11, pages 10-14, Japanese language (Abstract only).

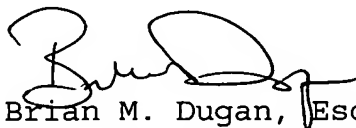
Park, et al., "Task Sequence Optimization for a Dual-Robot Assembly System using Evolutionary Algorithms", 2001, Proceedings of the Institution of Mechanical Engineers, Part B (Journal of Engineering Manufacture), Vol. 215, No. B6, pages 835-46.

Please charge deposit account No. 04-1696 in the amount of \$180.00 for consideration of this information disclosure statement under 37 C.F.R. § 1.97(c)(2).

These references are also listed on the accompanying  
Information Disclosure Statement (Form PTO-1449).

Consideration of the foregoing in relation to this  
patent application is respectfully requested.

Respectfully Submitted,

A handwritten signature in black ink, appearing to read "Brian M. Dugan", written over the printed name.

Brian M. Dugan, Esq.  
Registration No. 41,720  
Dugan & Dugan, PC  
Attorneys for Applicants  
(914) 332-9081

Dated:

9/8/06  
Tarrytown, New York

U.S. Patent No. 4,552,261, Raudat, et al.  
U.S. Patent No. 4,584,944, Clarence A. Dehne  
U.S. Patent No. 4,653,630, Anna Bravin  
U.S. Patent No. 4,679,685, Kenji Inoko  
U.S. Patent No. 4,702,365, Chong-Il Pak  
U.S. Patent No. 4,708,727, Cardenas-Franco, et al.  
U.S. Patent No. 4,720,006, Harald Lenherr  
U.S. Patent No. 4,750,605, Brems, et al.  
U.S. Patent No. 4,852,717, Ross, et al.  
U.S. Patent No. 4,901,843, Jeffrey A. Lashyro  
U.S. Patent No. 4,921,092, Crawford, et al.  
U.S. Patent No. 5,052,544, David L. Anderson  
U.S. Patent No. 5,092,450, Schommartz, et al.  
U.S. Patent No. 5,123,518, Ernest H. Pfaff  
U.S. Patent No. 5,341,915, Cordia, et al.  
U.S. Patent No. 5,560,471, Prochut, et al.  
U.S. Patent No. 5,653,327, Buday, Jr., et al.  
U.S. Patent No. 5,664,254, Ohkura, et al.  
U.S. Patent No. 5,782,338, Schuster, et al.  
U.S. Patent No. 5,797,249, Thomas Patterson Hartness  
U.S. Patent No. 5,829,574, Mario DelSanto  
U.S. Patent No. 5,865,292, Aguilar, et al.  
U.S. Patent No. 5,887,701, Mario Spatafora  
U.S. Patent No. 6,209,710, Mueller, et al.

U.S. Patent No. 6,223,887, Naoyuki Andou  
U.S. Patent No. 6,227,346, Lecomte, et al.  
U.S. Patent No. 6,227,348, Frei, et al.  
U.S. Patent No. 6,234,300, De Vos, et al.  
U.S. Patent No. 5,372,471, Wu  
U.S. Patent No. 4,027,246, Caccoma et al.  
U.S. Patent No. 6,082,948, Fishkin et al.  
U.S. Patent No. 5,888,042, Oda  
U.S. Patent No. 6,048,259, Asai  
U.S. Patent No. 5,390,785, Garric et al.  
U.S. Patent No. 3,845,286, Aronstein et al.  
U.S. Patent No. 6,026,561, Lafond  
U.S. Patent No. 5,884,392, Lafond  
U.S. Patent No. 5,411,358, Garric et al.  
U.S. Patent No. 5,382,127, Garric et al.  
U.S. Patent No. 5,388,945, Garric et al.  
U.S. Patent No. 5,818,716, Chin et al.  
U.S. Patent No. 5,612,886, Weng  
U.S. Patent No. 5,976,199, Wu et al.  
U.S. Patent No. 5,256,204, Wu  
U.S. Patent No. 5,110,249, Arthur E. Norman  
U.S. Patent No. 6,036,426, Gary Hillman  
U.S. Patent No. 6,183,186, Peltola et al.  
U.S. Patent No. 4,401,522, Buschow et al.

U.S. Patent No. 4,534,843, Johnson et al.

U.S. Patent No. 4,540,088, Bergh

U.S. Patent No. 4,650,264, Dahnert

U.S. Patent No. 4,775,046, Gramarossa et al.

U.S. Patent No. 6,309,279, Bowman et al.

U.S. Patent No. 6,235,634, Law et al.

U.S. Patent Application Publication No. 2002/0090282,

Bachrach

U.S. Patent Application Publication No. 2003/0010449,

Gramarossa et al.

U.S. Patent No. 5,460,478, Akimoto et al.

U.S. Patent No. 5,957,648, Bachrach

U.S. Patent No. 6,826,986, Lim et al.

U.S. Patent Application Publication No. 2004/0062633

Al, Rice et al.

U.S. Patent Application Publication No. 2005/0095110

Al, Lowrance et al.

U.S. Patent Application Publication No. 2004/0081538

Al, Rice et al.

U.S. Patent Application Publication No. 2004/0082546,

Elliott et al.

U.S. Patent Application Publication No. 2004/0193300,

Rice et al.

U.S. Patent Application Publication No. 2004/0081545,  
Elliott et al.

U.S. Patent Application Publication No. 2004/0076596,  
Elliott et al.

Foreign Art Reference No. JP 02098157 A (Japan)

Foreign Art Reference No. JP 00062949 A (Japan)

Foreign Art Reference No. JP 00335799 A (Japan)

Foreign Art Reference No. WO 97/09256 A1 (WIPO)

Foreign Art Reference No. WO 00/69724 A1 (WIPO)

Foreign Art Reference No. EP 0717717 B1 (EPO)

Foreign Art Reference No. EP 00735927 B1 (EPO)

Foreign Art Reference No. EP 00912426 B1 (EPO)

Foreign Art Reference No. EP 0 663 686 A1 (EPO)

Foreign Art Reference No. EP 0 365 589 B1 (EPO)

Foreign Art Reference No. EP 0 277 536 A (EPO)

Foreign Art Reference No. JP 63-020151 (Japan)

Foreign Art Reference No. JP 10-256346 (Japan)

Virvalo, T.K., "Cylinder Speed Synchronization", Dec.  
1978, Hydraulics and Pneumatics, Vol. 31, No. 12, pages 55-57.

Cheng, et al., "Adaptive Synchronization Control of a  
Robotic Manipulator Operating in an Intelligent Workcell", April  
1990, IEEE Transactions on Industrial Electronics, Vol. 37, No.  
2, pages 119-126.



U.S. Department of Commerce, Patent and Trademark Office

Docket No.:  
6900/Y01/SYNX/SYNX/JWSerial No.:  
10/650,310

## LIST OF RELEVANT ART CITED BY APPLICANT

(Use several sheets if necessary)

Applicants:

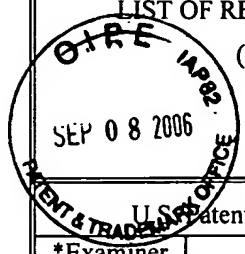
Michael R. Rice, et al.

Filing Date:

August 28, 2003

Group:

3651



## U.S. Patent Documents

*Examiner Initial		Document Number	Issue Date	Name	Class	Subclass	Filing Date If Appropriate
	US-1	4,006,813	02/08/77	Rene Fluck			
	US-2	4,166,527	09/04/79	Earl F. Beezer			
	US-3	4,222,479	09/16/80	Dugan, et al.			
	US-4	4,294,344	10/13/81	Johannes D. van Maanen			
	US-5	4,450,950	05/29/84	James C. Foote, Jr.			
	US-6	4,538,720	09/03/85	Jean-Louis Limousin			
	US-7	4,552,261	11/12/85	Raudat, et al.			
	US-8	4,584,944	04/29/86	Clarence A. Dehne			
	US-9	4,653,630	03/31/87	Anna Bravin			
	US-10	4,679,685	07/14/87	Kenji Inoko			
	US-11	4,702,365	10/27/87	Chong-Il Pak			

## Foreign Patent Documents

Translation

		Document Number	Date	Country	Class	Subclass	Yes	No
	F-1	JP 02098157 A	04/10/90	Japan			Abstract	
	F-2	JP 00062949 A	02/29/00	Japan			Abstract	
	F-3	JP 00335799 A	12/05/00	Japan			Abstract	
	F-4	WO 97/09256 A1	03/13/97	WIPO			Abstract	
	F-5	WO 00/69724 A1	11/23/00	WIPO			X	

## OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

	OT-1	Virvalo, T.K., "Cylinder Speed Synchronization", Dec. 1978, Hydraulics and Pneumatics, Vol. 31, No. 12, pages 55-57.
	OT-2	Cheng, et al., "Adaptive Synchronization Control of a Robotic Manipulator Operating in an Intelligent Workcell", April 1990, IEEE Transactions on Industrial Electronics, Vol. 37, No. 2, pages 119-126.
	OT-3	Shih-Hung Li, et al. "An Ultrahigh Speed Assembly Robot System. Part I. Design", 1994, Proceedings 1994 Japan-U.S.A. Symposium on Flexible Automation - A Pacific Rim Conference, Vol. 2, pages 465-72.

Examiner

Date Considered

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U.S. Department of Commerce, Patent and Trademark Office  <b>LIST OF RELEVANT ART CITED BY APPLICANT</b> (Use several sheets if necessary)				Docket No.: 6900/Y01/SYNX/SYNX/JW		Serial No.: 10/650,310	
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U.S. Patent Documents							
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	US-12	4,708,727	11/24/87	Cardenas-Franco, et al.			
	US-13	4,720,006	01/19/88	Harald Lenherr			
	US-14	4,750,605	06/14/88	Brems, et al.			
	US-15	4,852,717	08/01/89	Ross, et al.			
	US-16	4,901,843	02/20/90	Jeffrey A. Lashyro			
	US-17	4,921,092	05/01/90	Crawford, et al.			
	US-18	5,052,544	10/01/91	David L. Anderson			
	US-19	5,092,450	03/03/92	Schommartz, et al.			
	US-20	5,123,518	06/23/92	Ernest H. Pfaff			
	US-21	5,341,915	08/30/94	Cordia, et al.			
	US-22	5,560,471	10/01/96	Prochut, et al.			

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Document Number	Date	Country	Class	Subclass	Yes	No		
F-6	EP 0717717 B1	07/07/99	EPO		X			
F-7	EP 00735927 B1	11/03/99	EPO		Abstract			
F-8	EP 00912426 B1	08/09/00	EPO		Abstract			
F-9	EP 0 663 686 A1	07/19/95	EPO		X			
F-10	EP 0 365 589 B1	09/23/92	EPO		X			

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OT-4	Roberts, et al., "Feed Chute Geometry for Minimum Belt Wear", Sept. 1998, 6th International Conference on Bulk Materials Storage, Handling and Transportation, pages 153-159.
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	US-24	5,664,254	Ohkura, et al.				
	US-25	5,782,338	Schuster, et al.				
	US-26	5,797,249	Thomas Patterson Hartness				
	US-27	5,829,574	Mario DelSanto				
	US-28	5,865,292	Aguilar, et al.				
	US-29	5,887,701	Mario Spatafora				
	US-30	6,209,710	Mueller, et al.				
	US-31	6,223,887	Naoyuki Andou				
	US-32	6,227,346	Lecomte, et al.				
	US-33	6,227,348	Frei, et al.				

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	F-11	EP 0 277 536 A	08/10/88	EPO		Abstract		
	F-12	JP 63-020151	01/27/88	Japan		Abstract		
	F-13	JP 10-256346	09/25/98	Japan		X		
	F-14							
	F-15							

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OT-7	Park, et al., "Task Sequence Optimization for a Dual-Robot Assembly System using Evolutionary Algorithms", 2001, Proceedings of the Institution of Mechanical Engineers, Part B (Journal of Engineering Manufacture), Vol. 215, No. B6, pages 835-46.
OT-8	
OT-9	

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	US-34	6,234,300	De Vos, et al.				
	US-35	5,372,471	Wu				
	US-36	4,027,246	Caccoma et al.				
	US-37	6,082,948	Fishkin et al.				
	US-38	5,888,042	Oda				
	US-39	6,048,259	Asai				
	US-40	5,390,785	Garric et al.				
	US-41	3,845,286	Aronstein et al.				
	US-42	6,026,561	Lafond				
	US-43	5,884,392	Lafond				
	US-44	5,411,358	Garric et al.				

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	F-16							
	F-17							
	F-18							
	F-19							
	F-20							

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	OT-11
	OT-12

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	US-45	5,382,127	01/17/95	Garric et al.			
	US-46	5,388,945	02/14/95	Garric et al.			
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	US-48	5,612,886	03/18/97	Weng			
	US-49	5,976,199	11/02/99	Wu et al.			
	US-50	5,256,204	10/26/93	Wu			
	US-51	5,110,249	05/05/92	Arthur E. Norman			
	US-52	6,036,426	03/14/00	Gary Hillman			
	US-53	6,183,186	06/06/01	Peltola et al.			
	US-54	4,401,522	08/30/83	Buschow et al.			
	US-55	4,534,843	08/13/85	Johnson et al.			

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F-21								
F-22								
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F-24								
F-25								

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	US-59	6,309,279	Bowman et al.				
	US-60	6,235,634	Law et al.				
	US-61	2002/0090282	Bachrach				
	US-62	2003/0010449	Gramarossa et al.				
	US-63	5,460,478	Akimoto et al.				
	US-64	5,957,648	Bachrach				
	US-65	6,826,986	Lim et al.				
	US-66	2004/0062633 A1	Rice et al.				

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	F-26							
	F-27							
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	F-29							
	F-30							

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U.S. Patent Documents							
*Examiner Initial		Document Number	Issue Date	Name	Class	Subclass	Filing Date If Appropriate
	US-67	2005/0095110 A1	05/08/05	Lowrance et al.			
	US-68	2004/0081538 A1	04/08/04	Rice et al.			
	US-69	2004/0082546	04/08/04	Elliott et al.			
	US-70	2004/0193300	09/08/04	Rice et al.			
	US-71	2004/0081545	04/08/04	Elliott et al.			
	US-72	2004/0076596	04/08/04	Elliott et al.			
	US-73						
	US-74						
	US-75						
	US-76						
	US-77						

Foreign Patent Documents							Translation	
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	F-31							
	F-32							
	F-33							
	F-34							
	F-35							

OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)	
	OT-19
	OT-20
	OT-21

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